Appleton's Mathematical Series.

Primary Arithmetic.

A. G. Boeck, Engr. N.Y.

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APPLETONS' MATHEMATICAL SERIES.

A

PRIMARY ARITHMETIC.

BY

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"AN ENGLISH GRAMMAR;" "FIRST LESSONS IN COMPOSITION;" "ADVANCED COURSE OF COMPOSITION AND RHETORIC;" "A NATURAL PHILOSOPHY;" "ILLUSTRATED SCHOOL HISTORY OF THE UNITED STATES;" "PRIMARY HISTORY OF THE UNITED STATES;" ETC.

UPON THE BASIS OF THE WORKS OF

GEO. R. PERKINS, LL.D.

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1880.

PREFACE.

This little book, the first of our Series of Arithmetics, presupposes no knowledge of numbers whatever. It tries to give a correct idea of their value, both absolute and relative, by treating them concretely as well as abstractly from the very outset, pictorial illustrations being freely used for that purpose. We have not sought in its pages to go *far*, but to go *thoroughly*. It is therefore confined to the four fundamental operations, a very brief view of fractions, the most important tables of moneys, weights, and measures, and easy exercises under them. These subjects, it is believed, are so treated, as to make the young pupil think for himself, and to lay the right kind of foundation for a mathematical course. One thing is taught at a time, and great care has been taken to present every thing in its proper place. It will be observed that throughout the book slate exercises go hand in hand with mental operations. In the author's opinion, they are indispensable, from the first, for inspiring the beginner with that interest in the subject which is essential to success.

This book imposes no labor on the teacher, in the way of explaining orally, furnishing examples, &c. It is thought to contain in itself all that is needed. The author would only ask those who use it to be sure that every lesson is thoroughly mastered, before proceeding to the next. Each principle presented, each table, should be perfectly understood and memorized before leaving it, even though it be necessary to repeat the lesson again and again. Time saved by allowing a single lesson to pass unmastered, will be a tenfold loss in the end.

The Roman Notation is not explained in this volume; but by means of the numerals used in the lesson-headings the pupil may readily be made to understand it.

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Southern District of New York.

PRIMARY ARITHMETIC.

LESSON I.

Touch your head. How many heads have you? ONE.

Touch your eyes. How many eyes have you? TWO.

Touch the joints of your fore-finger. How many are there? THREE.

Touch the fingers of your left hand. How many are there? FOUR.

Touch the fingers and thumb of your left hand. How many do they make? FIVE.

When we say ONE, TWO, THREE, FOUR, FIVE, what do we do?

Answer. We count.

Count five; count four; count three; count two.

What are one, two, three, four, five, called?

Answer. **Numbers.**

Which is the smallest of these numbers?

Which is the greatest of these numbers?

LESSON II.

Count the birds on this branch. How many are there? FIVE.

If another alights on it, how many will there be? SIX.

If another joins them, how many will that make? SEVEN.

If another comes, how many? EIGHT.

One more will make how many? NINE.

And one more, how many? TEN.

Count six; count seven; eight; nine; ten.
Which is greater, ten or five? Two or six?

What do we use, to express numbers?
Answer. Ten characters, called **Figures.**

Learn the names of these ten figures, and how to make them neatly on your slate.

NAUGHT	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT	NINE
0	1	2	3	4	5	6	7	8	9

LESSON III.

Count these rabbits. How many are there?

How do we express ten with figures?

Answer. By putting a naught after a one (10).

Learn the numbers, going up from ten:—

Eleven *11*	Fourteen *14*	Seventeen *17*
Twelve *12*	Fifteen *15*	Eighteen *18*
Thirteen *13*	Sixteen *16*	Nineteen *19*

Twenty . . . *20*

Read these numbers: 13; 7; 19; 11; 9; 2; 20; 12; 5; 16; 3; 10; 4; 18; 6; 15; 8; 17.

Write in figures, six; ten; three; eighteen; eight; twenty; two; twelve; fourteen; five.

What is the reading of numbers called?

Answer. **Numeration.**

What is the writing of numbers called?

Answer. **Notation.**

LESSON IV.

Now we have some marks in different rows. Count those in each row.

The number of marks is given after each row; then come the written figures that represent this number, then the printed figures.

|	One	1 1
||	Two	2 2
|||	Three	3 3
||||	Four	4 4
|||||	Five	5 5
||||||	Six	6 6
|||||||	Seven	7 7
||||||||	Eight	8 8
|||||||||	Nine	9 9
||||||||||	Ten	10 10
|||||||||||	Eleven	11 11
||||||||||||	Twelve	12 12
|||||||||||||	Thirteen	13 13
||||||||||||||	Fourteen	14 14
|||||||||||||||	Fifteen	15 15
||||||||||||||||	Sixteen	16 16
|||||||||||||||||	Seventeen	17 17
|||||||||||||||||| . . .	Eighteen	18 18
||||||||||||||||||| . . .	Nineteen	19 19
|||||||||||||||||||| . .	Twenty	20 20

Which is greater, twenty or ten? 11 or 18?

LESSON V.

Learn the twenties:—

Twenty-one 21	Twenty-four 24	Twenty-seven 27
Twenty-two 22	Twenty-five 25	Twenty-eight 28
Twenty-three 23	Twenty-six 26	Twenty-nine 29

In the twenties, which figure remains the same, and which does not?

Answer. The left-hand figure remains the same—2. The right-hand figure changes.

What comes after 29? *Answer.* Thirty (30).

Learn the thirties:—

Thirty-one 31	Thirty-four 34	Thirty-seven 37
Thirty-two 32	Thirty-five 35	Thirty-eight 38
Thirty-three 33	Thirty-six 36	Thirty-nine 39

What is the left-hand figure in all the thirties? Which figure changes?

What comes after 39? *Answer.* Forty (40).

Learn the forties:—

Forty-one 41	Forty-four 44	Forty-seven 47
Forty-two 42	Forty-five 45	Forty-eight 48
Forty-three 43	Forty-six 46	Forty-nine 49

Fifty 50

Which is greater, fifty or forty? 49 or 39? 28 or 38? 26 or 17? 9 or 15? 15 or 30?

Count from 1 to 50. Count from 20 to 1 backwards; *twenty*, *nineteen*, *eighteen*, &c.

LESSON VI.

Learn the numbers, going up from fifty :—

Fifty	50	Sixty-seven	67	Eighty-four	84
Fifty-one	51	Sixty-eight	68	Eighty-five	85
Fifty-two	52	Sixty-nine	69	Eighty-six	86
Fifty-three	53	Seventy	70	Eighty-seven	87
Fifty-four	54	Seventy-one	71	Eighty-eight	88
Fifty-five	55	Seventy-two	72	Eighty-nine	89
Fifty-six	56	Seventy-three	73	Ninety	90
Fifty-seven	57	Seventy-four	74	Ninety-one	91
Fifty-eight	58	Seventy-five	75	Ninety-two	92
Fifty-nine	59	Seventy-six	76	Ninety-three	93
Sixty	60	Seventy-seven	77	Ninety-four	94
Sixty-one	61	Seventy-eight	78	Ninety-five	95
Sixty-two	62	Seventy-nine	79	Ninety-six	96
Sixty-three	63	Eighty	80	Ninety-seven	97
Sixty-four	64	Eighty-one	81	Ninety-eight	98
Sixty-five	65	Eighty-two	82	Ninety-nine	99
Sixty-six	66	Eighty-three	83	One hundred	100

How many figures does 100 contain ?

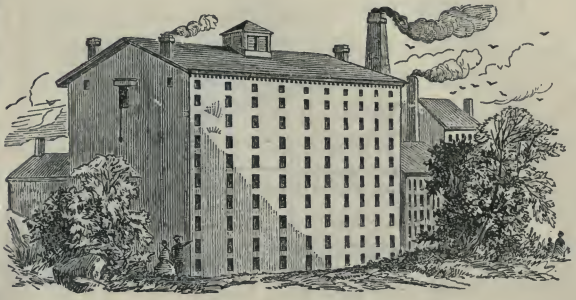
What is the greatest number that can be expressed with two figures ? *Answer.* 99.

What is the greatest number that can be expressed with one figure ? *Answer.* 9.

Name in order the numbers between 1 and 100 that contain naught.

Ans. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.

LESSON VII.



Here is a factory ten stories high. How many windows are there in each story?

Count the windows in the two lowest stories. How many do you find? How many rows of 10 each make 20? How many tens in 20?

Count the windows in the three lowest stories. How many tens in thirty?

Add another row of windows, and how many do you find? How many tens in forty?

Count the windows in the five lowest rows. How many tens in fifty?

How many tens in 60? How many tens in 70? How many tens in eighty? How many tens in 90?

Count all the windows. How many are there? How many rows of 10 each make 100? How many tens in one hundred?

LESSON VIII.

Learn this table :—

20 is 2 tens.	60 is 6 tens.
30 is 3 tens.	70 is 7 tens.
40 is 4 tens.	80 is 8 tens.
50 is 5 tens.	90 is 9 tens.

Which figure shows the number of tens?

Answer. The second, or left-hand figure.

What is the second place called?

Answer. The place of *tens.*

What is the first, or right-hand place called?

Answer. The place of *units.*

Write down 22. What figures do you use?

Have these twos the same value?

Answer. No. The 2 in the second place is ten times as great as the 2 in the first place.

Why is this?

Answer. Because the 2 in the second place denotes two *tens*, or *twenty;* the 2 in the first place denotes two *units*, or *two.*

What, then, is the effect of removing a figure from the first place to the second?

Answer. Its value is increased ten times; 20 is ten times as great as 2.

Write down the numbers from 1 to 100.

LESSON IX.

How do you write six tens?

Ans. 6 in the second place denotes six tens. As there are no units, I put a 0 after it—60.

How do you write six tens, one unit?

Ans. 6 in the second place denotes six tens; 1 in the first place denotes one unit—61.

Read this number. *Ans.* Sixty-one.

How must a column of numbers be written?

Ans. So that units may stand under units, and tens under tens.

Write the following:—Four tens, three units; nine tens, nine units; three tens, seven units; eight tens, two units; five tens, two units; two tens, five units; one ten; seven tens.

Read the numbers just written.

Mention the tens and units in the following numbers, and then read them:—80 (*eight tens*, *eighty*); 75 (*seven tens*, *five units*, *seventy-five*); 69; 93; 41; 28; 7; 50; 17; 32; 84; 22; 61; 14; 57; 46; 70; 11; 98; 23.

Which is greater, a ten or a unit?

How can you turn three into thirty?

Count from 100 to 75 backwards. Count from 50 to 20 backwards.

Write down in columns the numbers in order, going backwards from 100 to 1.

LESSON X.

How much do 10 tens make?

Ans. One hundred—100.

Which figure shows the number of hundreds?

Ans. The third figure—1.

How, then, do we write two hundred?

Ans. By putting a 2 in the third place—200.

Learn the hundreds:—

One hundred	100	Five hundred	500
Two hundred	200	Six hundred	600
Three hundred	300	Seven hundred	700
Four hundred	400	Eight hundred	800

Nine hundred . . . 900

How many times greater is 1 in the third place than 1 in the second place?

Ans. Ten times; 100 is ten times 10.

What is the effect, then, of removing a figure one place to the left?

Ans. Its value is increased ten times.

Name the places, going from right to left.

Ans. UNITS, TENS, HUNDREDS.

Count from 100 to 200. Thus:—*One hundred and one, one hundred and two*, &c.

Write the numbers from 100 to 200. Thus:

101	104	107	110	113	116
102	105	108	111	114	117
103	106	109	112	115	118, &c.

LESSON XI.

What is Numeration?

Answer. The art of reading numbers.

What is Notation?

Answer. The art of writing numbers.

EXERCISE IN NUMERATION.

Read the following numbers:—

198	912	15	853	4	909
611	1	268	309	200	88
82	79	41	470	224	625
703	816	526	6	36	64
434	349	62	518	147	517

EXERCISE IN NOTATION.

Write these numbers in figures:—

Eighty-three; Fourteen; Two hundred and sixty; Nine hundred and forty-eight; One hundred and nine; Twelve; Ninety-one; Seven hundred and fifty-seven; Thirty-four.

Three hundred and fifteen; Seventy-two; Six hundred and twenty-four; One hundred; Four hundred and seven; Eight hundred and eleven; Eighty-eight; Five hundred and forty; Fifty; Seven hundred and twenty; Ninety-nine.

Counting.—Count from 800 to 900.

LESSON XII.

Look at the picture. You see one chimney in one part of the roof, and one chimney in another part; how many chimneys do you see in all? Count them. One and one are—how many?.

One sheep is feeding by itself, and two sheep are feeding together; how many sheep are there in all? One and two are —.

One boy and three girls are walking. How many in all are walking? One and three are —.

One dog is lying down, four dogs are running; how many dogs are there altogether? One and four are —.

There is one window on one side of the house, and five windows on another. How many windows are there altogether? One and five are —.

There is one girl jumping the rope, and six girls not jumping it. How many girls are there in all? One and six are —.

On the lawn we see one boy and seven girls; counting the boy and girls together, how many are on the lawn? One and seven are —.

One tree stands on one side of the house, and eight trees on the other. How many trees do you count altogether? One and eight are —.

One chicken by itself, and nine chickens in a group; how many chickens in all? One and nine are —.

One hen and ten chickens; counting hen and chickens together, how many do you find? One and ten are —.

What you have just answered, will now be put in a table. Learn it perfectly.

1 and 1 are 2.	1 and 6 are 7.
1 and 2 are 3.	1 and 7 are 8.
1 and 3 are 4.	1 and 8 are 9.
1 and 4 are 5.	1 and 9 are 10.
1 and 5 are 6.	1 and 10 are 11.

When you put numbers together, to find how much they make, what is the process called?

Ans. **Addition.**

LESSON XIII.

What is Addition?

Ans. Addition is the process of uniting two or more numbers in one.

When you unite two or more numbers in one, what do you find? *Ans.* I find their **Sum.**

Two men are riding; one is walking by their side; how many men in all? Add 2 and 1.

Jane has two kittens; her sister also has two. How many kittens have both? Add 2 and 2.

Jane had two dollars, and her father gave her three more. How many had she then?

Learn the Tables so as to say them forward and backward, in order or skipping about.

2 and 1 are 3.	2 and 6 are 8.
2 and 2 are 4.	2 and 7 are 9.
2 and 3 are 5.	2 and 8 are 10.
2 and 4 are 6.	2 and 9 are 11.
2 and 5 are 7.	2 and 10 are 12.

LESSON XIV.

3 and 1 are 4.	3 and 6 are 9.
3 and 2 are 5.	3 and 7 are 10.
3 and 3 are 6.	3 and 8 are 11.
3 and 4 are 7.	3 and 9 are 12.
3 and 5 are 8.	3 and 10 are 13.

[Let the pupil *in all cases* add each number as a whole, and not by counting or taking one unit at a time. Say *three and three are six;* not *three, four, five, six.*]

1. A regiment marched three miles before dinner, and five miles after dinner. How far did it march in all? Add 3 and 5.

2. If you have 3 marbles in one pocket, and 7 in another, how many have you in both?

3. Three horses are in the stable, and six are in the field. How many horses in all?

4. Ruth bought three books; she had ten books before. How many has she now?

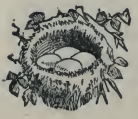
Now you have a few examples in addition for your slate. Copy the figures in each column, add them, and write the sum below the line.

1	1	2	7	8	5	9	10
1	2	3	3	1	3	2	1
—	—	—	—	—	—	—	—
1	10	9	8	74	65	7	
1	1	1	2	10	21	1	
1	1	2	1	12	11	2	
—	—	—	—	—	—	—	

LESSON XV.

How many are 1 and 4? ✲ ✲✲✲✲
How many are 4 and 1? ✲✲✲✲ ✲
How many are 2 and 4? 4 and 2?
How many are 3 and 4? 4 and 3?

When you are adding numbers, does it make any difference which you take first?



Here are four eggs in one bird's-nest, four in another; count how many there are in both. Add 4 and 4.

Four kittens are running one way, and five the other; how many in all? 4 and 5 make —.

Four rats and six rats make how many rats? How many are 4 and 6?

---

4 and 1 are 5.	4 and 6 are 10.
4 and 2 are 6.	4 and 7 are 11.
4 and 3 are 7.	4 and 8 are 12.
4 and 4 are 8.	4 and 9 are 13.
4 and 5 are 9.	4 and 10 are 14.

LESSON XVI.

1. Harry gets four good marks on Monday, and seven on Tuesday; how many does he get both days? How many do 4 and 7 make?

2. I have four fingers on each hand; how many have I on both? What is the sum of 4 and 4?

3. If four cars leave in one train, and ten in another, how many leave in both? Add 4 and 10.

4. Ida had one pencil, then she bought three, and the next day her father gave her seven more; how many had she then in all? 1, 3, and 7, make how many?

5. A toyman sold two dolls in the morning, two in the afternoon, and nine in the evening; how many did he sell altogether? 2 and 2 added to 9 make how many?

6. If I give four dollars for a vest, and eight dollars for a coat, how much do both cost me?

Add the following numbers on your slate. Be sure to set units under units, tens under tens.

Add twenty-three and thirty-four. Add one hundred, twelve, and three hundred and forty-three. Add forty-four to four hundred and one. Add four and eleven. Add seventy-four and two hundred and two. Add ninety-four and three hundred.

LESSON XVII.

How many are one and five? ✳ ✳✳✳✳✳✳
How many are five and one? ✳✳✳✳✳✳ ✳
How many are 2 and 5? 5 and 2?
How many are 3 and 5? 5 and 3?

Five lilies and four lilies are how many lilies?

Five boys are sailing in one boat, and five in another. Count how many there are in both.

Five tops are lying on the floor, and six are spinning; how many do you see in all?

How many are 5 and 7? ||||| |||||||
How many are 5 and 8? ||||| ||||||||
How many are 5 and 9? ||||| |||||||||
How many are 5 and 10? ||||| ||||||||||
Which is the greater, five or ten?

5 and 1 are 6.	5 and 6 are 11.
5 and 2 are 7.	5 and 7 are 12.
5 and 3 are 8.	5 and 8 are 13.
5 and 4 are 9.	5 and 9 are 14.
5 and 5 are 10.	5 and 10 are 15.

LESSON XVIII.

1. Five years ago Mary was nine years old; how old is she now? How much are 5 and 9?

2. We have five toes on each foot; how many toes have we in all? What is the sum of 5 and 5?

3. Horace has five marbles in one bag, and ten in another; how many has he in both? Add 5 and 10.

4. Five pigs are in the orchard, and seven in the sty. How many pigs are there altogether?

5. Louise has three cents, Mary two, and George eight; how many cents have all three?

6. Susan has four books; if her brother gives her one more, and her sister two, how many books will she have? Add 4, 1, and 2.

7. Richard caught five fish, and Ben six; how many did both catch? How many are 5 and 6?

8. The first story of a house contains two rooms, the second three, and the third three; how many rooms does the whole house contain?

Here are some examples for your slate. Read each of the numbers added, and also the answers.

(10)	(11)	(12)	(13)	(14)	(15)
4	403	927	8	5	765
14	515	20	610	372	121
51	30	32	41	112	102

LESSON XIX

How many are one and six? ✲ ✲✲✲✲✲✲✲

How many are six and one? ✲✲✲✲✲✲✲ ✲

How many are 2 and 6? 6 and 2?
How many are 3 and 6? 6 and 3?
How many are 4 and 6? 6 and 4?
How many are 5 and 6? 6 and 5?

Six flies and six flies are how many flies?

Six squirrels are eating, seven are running; count how many there are in all.

If you put six forks and eight forks together, how many will you have?

How many are 6 and 9? |||||| |||||||||
How many are 6 and 10? |||||| ||||||||||

6 and 1 are 7.	6 and 6 are 12.
6 and 2 are 8.	6 and 7 are 13.
6 and 3 are 9.	6 and 8 are 14.
6 and 4 are 10.	6 and 9 are 15.
6 and 5 are 11.	6 and 10 are 16.

LESSON XX.

1. Troy is six miles above Albany, and Lansingburg is three miles farther; how far is Lansingburg from Albany? 6 and 3 make how many?

2. If I have 6 dollars in my pocket, and 9 in my purse, how much have I in all? Add 6 and 9.

3. Three dogs, and three dogs, and three dogs, make how many? How many are 3, 3, and 3?

4. Two ships, four schooners, and ten brigs, are in port; how many vessels does that make in all? What is the sum of 2, 4, and 10?

5. A baker sold six loaves of wheat bread, and two of rye; how many loaves did he sell in all?

6. Mary gave a poor man six cents, and Kate gave him five; how much did he receive from both? How much are 6 and 5?

7. If six horses are in the stable, and I put in eight more, how many will be there then?

8. Six goats and one goat make how many?

9. Six shoes in one drawer, and six in another, make how many in all?

Add the following numbers on your slate:—

(10)	(11)	(12)	(13)	(14)	(15)
80	92	43	66	730	80
31	25	653	42	10	605
26	41	203	11	256	113
137					798

LESSON XXI.

How many are 1 and 7? ✲ ✲✲✲✲✲✲✲

How many are 7 and 1? ✲✲✲✲✲✲✲ ✲

How many are 2 and 7? 7 and 2?

How many are 3 and 7? 7 and 3?

How many are 4 and 7? 7 and 4?

How many are 5 and 7? 7 and 5?

How many are 6 and 7? 7 and 6?

Mary has a bunch of seven cherries, and buys seven more; how many has she then? Count and see.

Seven boys and eight girls make how many children in all? How many are 7 and 8?

Seven wine glasses in one row and nine in another make how many in all? How many are 7 and 9?

How many are 7 and 10? ||||||| ||||||||||

7 and 1 are 8.	7 and 6 are 13.
7 and 2 are 9.	7 and 7 are 14.
7 and 3 are 10.	7 and 8 are 15.
7 and 4 are 11.	7 and 9 are 16.
7 and 5 are 12.	7 and 10 are 17.

LESSON XXII.

1. To get home, I shall have to go seven miles by steamboat, and five by stage; how far will I have to travel? What is the sum of 7 and 5?

2. A farmer had seven rooms in his house, and built a wing with three rooms more; how many rooms had he then? How many are 7 and 3?

3. A gardener set out three lilacs, four roses, and ten verbenas; how many plants did he set out in all? Add 3, 4, and 10.

4. Mary dressed five dolls for the fair, Augusta two, and Helen seven; how many did all three dress? How many are 5, 2, and 7?

5. If my black hen has seven chickens, and my white hen nine, how many have both?

6. How far will a horse go in 2 hours, if he travels 7 miles the first hour, and 6 the second?

7. How many are 6 and 4? 5 and 9? 4 and 7? 7 and 4? 7 and 2? 3 and 10? 2 and 8? 1, 6, and 1? 4, 3, and 8? 6, 1, and 6? 1 and 7? 6 and 3?

Here are some examples for your slate. Make your figures neatly. Read each number, and tell whether the upper or lower one is the greater.

(8)	(9)	(10)	(11)	(12)	(13)
163	329	48	856	775	507
425	670	731	132	11	182

LESSON XXIII.

How many are 1 and 8? ✳ ✳✳✳✳✳✳✳✳✳
How many are 8 and 1? ✳✳✳✳✳✳✳✳✳ ✳
How many are 2 and 8? 8 and 2?
How many are 3 and 8? 8 and 3?
How many are 4 and 8? 8 and 4?
How many are 5 and 8? 8 and 5?
How many are 6 and 8? 8 and 6?
How many are 7 and 8? 8 and 7?

Eight doves in one group, and eight in another, make how many in all? How many are 8 and 8?

Eight rounds in one ladder, and nine rounds in another, make how many rounds in all? What is the sum of 8 and 9?

Eight spokes are in one wheel, and ten in another; how many are in both? 8 and 10 are —.

8 and 1 are 9.	8 and 6 are 14.
8 and 2 are 10.	8 and 7 are 15.
8 and 3 are 11.	8 and 8 are 16.
8 and 4 are 12.	8 and 9 are 17.
8 and 5 are 13.	8 and 10 are 18.

LESSON XXIV.

1. A lady bought eight cents' worth of needles, and six cents' worth of thread; how much did she lay out? How many are 8 and 6?

2. Eight birds are sitting on a bush; if ten more alight by their side, how many will there be? What is the sum of 8 and 10?

3. If I spend six dollars for clothes, two dollars for books, and three dollars for groceries, how much do I spend in all? 6, 2, and 3, are —.

4. Sarah has three rabbits, Ruth five, and Herman seven. If Sarah and Ruth give theirs to Herman, how many will he have? Add 3, 5, and 7.

5. If a dairy-maid makes eight pounds of butter one day, and four the next, how many does she make in all? How many are 8 and 4?

6. How many boys will two benches hold, if one holds eight and the other nine? Add 8 and 9.

7. Add on your slate seventeen and eighty.

8. Add twenty to two hundred and twelve.

Read these numbers; add them.

(9)	(10)	(11)	(12)	(13)	(14)	(15)
63	57	91	40	21	35	72
82	81	88	88	85	84	85
145						157

LESSON XXV.

How many are one and nine? † †††††††††
How many are nine and one? ††††††††† †
How many are 2 and 9? 9 and 2?
How many are 3 and 9? 9 and 3?
How many are 4 and 9? 9 and 4?
How many are 5 and 9? 9 and 5?
How many are 6 and 9? 9 and 6?
How many are 7 and 9? 9 and 7?
How many are 8 and 9? 9 and 8?

Nine stars in one group, and nine in another, make how many stars in all? Count and see.

If there are nine cannon-balls in one pile, and ten in another, how many balls are there in both? What is the sum of 9 and 10?

A jeweller has nine watches in his safe, and five on his counter; how many has he in all?

---

9 and 1 are 10.	9 and 6 are 15.
9 and 2 are 11.	9 and 7 are 16.
9 and 3 are 12.	9 and 8 are 17.
9 and 4 are 13.	9 and 9 are 18.
9 and 5 are 14.	9 and 10 are 19.

LESSON XXVI.

1. If Harry has nine dollars in the bank, and four in his pocket, how much has he in all?

2. A milkman sold one customer three quarts of milk, another six quarts, and a third seven; how many quarts did he sell all three? What is the sum of 3, 6, and 7?

3. Blanche has two canary birds, Rose seven, and Alice three; if Rose and Alice give theirs to Blanche, how many will she then have?

4. If one field yields nine bushels of potatoes, and another ten, how much do both yield?

5. If Frank gets nine good marks in the morning, and five in the afternoon, how many does he get during the day? How many are 9 and 5?

6. Nine currants on one string, and nine on another, make how many currants in all? 9 and 9 are how many?

7. There are nine eggs in one hen's nest, and six in another; if we put the eggs together, how many will there be? What is the sum of 9 and 6?

8. What is the sum of 1, 8, and 2?

Read the following numbers. Add them.

(9)	(10)	(11)	(12)	(13)	(14)
510	601	17	82	140	91
67	95	700	33	806	45
412	203	41	62	42	52

LESSON XXVII.

How many are one and ten? 10 1
How many are ten and one? 1 10
How many are 2 and 10? 10 and 2?
How many are 3 and 10? 10 and 3?
How many are 4 and 10? 10 and 4?
How many are 5 and 10? 10 and 5?
How many are 6 and 10? 10 and 6?
How many are 7 and 10? 10 and 7?
How many are 8 and 10? 10 and 8?
How many are 9 and 10? 10 and 9?
How many are two tens? *Ans.* Twenty. 10
How many are ten and ten? 10

You have eight fingers and two thumbs; I have the same. How many fingers and thumbs have we together? What is the sum of 8, 2, and 10?

A dime is worth ten cents; a half-dime is worth five cents. How many cents are both together worth? How many are 10 and 5?

What is the sum of 7, 3, and 8?

What is the sum of 6, 4, and 3?

---

10 and 1 are 11.	10 and 6 are 16
10 and 2 are 12.	10 and 7 are 17.
10 and 3 are 13.	10 and 8 are 18.
10 and 4 are 14.	10 and 9 are 19
10 and 5 are 15.	10 and 10 are 20.

LESSON XXVIII.

What is the greatest number that can be expressed with one figure?

Ans. Nine (9).

If you add 1 to 9, what do you get?

Ans. Ten (10).

What is the greatest number that can be expressed with two figures?

Ans. Ninety-nine (99).

If you add 1 to 99, what do you get?

Ans. One hundred (100).

What is the greatest number that can be expressed with three figures?

Ans. Nine hundred and ninety-nine (999).

If you add 1 to 999, what do you get?

Ans. One thousand (1000).

How many figures are used in writing 1000?

What figure shows the number of thousands?

Ans. The fourth figure—1.

How, then, do we write two thousand?

Ans. By putting a 2 in the fourth place.

Learn the thousands:—

One thousand	1000	Five thousand	5000
Two thousand	2000	Six thousand	6000
Three thousand	3000	Seven thousand	7000
Four thousand	4000	Eight thousand	8000

Nine thousand . . . 9000

LESSON XXIX.

Learn the even hundreds between 1000 and 2000:—

1100, one thousand one hundred, *or* eleven hundred.
1200, one thousand two hundred, *or* twelve hundred.
1300, one thousand three hundred, *or* thirteen hundred.
1400, one thousand four hundred, *or* fourteen hundred.
1500, one thousand five hundred, *or* fifteen hundred.
1600, one thousand six hundred, *or* sixteen hundred.
1700, one thousand seven hundred, *or* seventeen hundred.
1800, one thousand eight hundred, *or* eighteen hundred.
1900, one thousand nine hundred, *or* nineteen hundred.
2000, two thousand.

Write on your slate the numbers between 1000 and 1100, and then read them. Thus:

1001, one thousand and one.
1002, one thousand and two, &c

Write one thousand and ten. 1010.
Write two thousand and ten. 2010.
Write 1 thousand 2 hundred and ten. 1210.
Write 8 thousand 2 hundred and ten. 8210.
Write one thousand four hundred. 1400.
Write six thousand four hundred. 6400.

Name the places, going from right to left.
Ans. Units, Tens, Hundreds, Thousands.

Read and then add the following numbers:—

1024	1031	1059	1400	1099
2024	3031	4000	5000	1600

LESSON XXX.

What place denotes thousands?

Ans. The fourth place.

How do you write five thousands, nine hundreds, seven tens, one unit?

Ans. 5 in the fourth place denotes five thousands; 9 in the third place, nine hundreds; 7 in the second place, seven tens; 1 in the first place, one unit. Thus we get 5971.

Read this number.

Ans. Five thousand nine hundred and seventy-one.

Write the following, placing units under units, tens under tens, &c.: Four thousands, 8 hundreds, 6 tens, 2 units; five thousands, 3 hundreds, 1 ten, 1 unit; nine thousands, 2 hundreds, 8 tens, 7 units; seven thousands, 4 hundreds.

Read the numbers just written.

Mention the thousands, hundreds, tens, and units, in the following numbers:—4629; 9780; 5111; 1236; 7405; 2293; 529; 18.

When a naught stands in the third or second place, must you say *no hundreds, no tens?*

Ans. No; it is passed over in reading. Thus, 9007 is read *nine thousand and seven.*

Read 7012; 6099; 3003; 8064; 1011; 5002.

LESSON XXXI.

Write the following numbers with figures:—
One thousand six hundred and fifty-three.
Five thousand nine hundred and eighteen.
Seven thousand eight hundred and ninety.
Three thousand five hundred and seven.
Eight thousand and forty-nine.

Read the following numbers:—4321; 2906; 6870; 5012; 1864; 9990; 1007; 8700; 3401.

When we count, *one*, *two*, *three*, *four*, &c., how do we get each number?

Ans. By adding 1 to the number going before.

Now in stead of adding 1, add 2 each time:

1	7	13	19	25	31	37
3	9	15	21	27	33	39
5	11	17	23	29	35	41

and so on to 99.

In adding units, if the sum is 9, what do we do?

Ans. We write the 9 in the units' place.

If the sum is 10, what do we do?

Ans. 10 consists of 0 units, 1 ten. Hence we write 0 in the first or units' place, and 1 in the second or tens' place.

$$\begin{array}{r} 6 \\ 4 \\ \hline 10 \end{array}$$

Whenever the sum consists of two figures, how must we place them?

Ans. Set the right-hand figure in the units' place, the left-hand figure in the tens' place.

LESSON XXXII.

Add the following numbers :—

(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	5	8	7	9	4	9
3	4	1	3	1	1	1
2	3	4	2	2	1	1
1	2	3	4	5	6	7

26
17
43

Now suppose we have to add 26 and 17. Begin at the right. 7 and 6 are 13—three units and 1 ten. We write 3 in the units' place, and as there are other tens we add the 1 ten in with them, making 4, which we write in the tens' place. Answer, 43.

When the sum of a column consists of two figures, which figure must we write under the column added?

Ans. The right-hand figure.

What must we do with the left-hand figure?

Ans. We must add the left-hand figure to the next column.

What if there are no more columns to be added?

Ans. Then we must write the left-hand figure in the sum, in the next place on the left.

What do you write down, and what do you add to the next column, if the sum of a column is 96? If it is 71; 80; 52; 11; 48; 84; 17?

LESSON XXXIII.

Look at this example. Learn to add each column aloud, in the following manner:—

1959
1032
3301
2223
1342
9857

1ST COLUMN.—*Two*, *five*, *six*, *eight*, *seventeen*—write down 7, and add 1 to the next column.

2D COLUMN.—*One*, *five*, *seven*, *ten*, *fifteen*—write down 5, and add 1 to the next column.

3D COLUMN.—*One*, *four*, *six*, *nine*, *eighteen*—write down 8, and add 1 to the next column.

4TH COLUMN.—*One*, *two*, *four*, *seven*, *eight*, *nine*—write it down. *Answer*, 9857.

Add the following in the same way, not on the slate, but aloud.

(1)	(2)	(3)	(4)	(5)
112	1270	1492	1666	374
22	321	2101	1022	311
332	2011	2121	232	1002
232	3322	1060	2432	2123
211	1346	2714	4212	5463
909	8270	9488	9564	9273

Commencing with 2, give the numbers formed by adding 2 each time, up to 100. Thus:—

2	6	10	14	18	22	26
4	8	12	16	20	24	28, &c.

LESSON XXXIV.

Add the following numbers. When the left-hand figure of any sum is to be added to the next column, write it in the space under the column.

(1)	(2)	(3)	(4)
1228	3222	1252	2122
1654	222	2202	1422
2343	2222	1942	1465
3421	3965	2749	4358

How much are 3 and 3? 3 and 13?
How much are 3 and 4? 3 and 34?
How much are 3 and 5? 3 and 45?
How much are 3 and 6? 3 and 66?
How much are 3 and 7? 3 and 87?
Which is greater, 900 or 700? 900 or 1000?
Which is greater, 1 hundred or 1 thousand?

Commencing with 3, give the numbers formed by adding 3 each time:—

3	18	33	48	63	78	93
6	21	36	51	66	81	96
9	24	39	54	69	84	99
12	27	42	57	72	87	102
15	30	45	60	75	90	105

If I have 27 roses, and buy 3 more, how many will I then have? If some one gives me three more, and I raise 3 from slips, how many will I then have in all?

LESSON XXXV.

How many are 4 and 4? 4 and 14? 4 and 24? 4 and 34? 4 and 44? 4 and 54? 4 and 64?
How many are 4 and 5? 4 and 75? 4 and 85?
How many are 4 and 6? 4 and 86? 4 and 96?
How many are 4 and 7? 4 and 47? 4 and 57?

Robert has 8 fish in his basket and 4 on the grass; how many has he in all? How many are 8 and 4? 18 and 4? 28 and 4? 48 and 4?
How many are 4 and 9? 4 and 89? 34 and 9?

Commencing with 4, give the numbers formed by adding 4 each time. Thus:—

4	20	36	52	68	84
8	24	40	56	72	88
12	28	44	60	76	92
16	32	48	64	80	96

LESSON XXXVI.

How many are 5 and 5? 5 and 15? 5 and 25? 5 and 45?

How many are 5 and 6? 5 and 26? 5 and 36? 5 and 46? 5 and 56? 55 and 6? 5 and 66? 65 and 6?

How many are 5 and 7? 5 and 77?

How many are 5 and 8? 5 and 88?

How many are 5 and 9? 5 and 29? 25 and 9? 5 and 49? 45 and 9? 5 and 59? 5 and 69?

Commencing with 5, give the numbers formed by adding 5 each time. Thus :—

5	20	35	50	65	80	95
10	25	40	55	70	85	100
15	30	45	60	75	90	105

What do these numbers end in?

---

1. John had twenty cents; his mother gave him five, and his father five more. How many had he then? How many are 20, 5, and 5?

2. Forty-eight apples in one basket, and five in another, make how many apples in all?

3. A traveller rode thirty-nine miles one day, and five miles the next. How far did he ride both days? Add 39 and 5.

4. I have just found five pins, said Eli, and I had seventeen before. How many have I now?

LESSON XXXVII.

How many are 6 and 6? 6 and 16? 46 and 6? How many are 6 and 7? 6 and 27? 27 and 6?

How many are 6 and 8? 6 and 88? 38 and 6? 58 and 6? How many are 6 and 9? 6 and 99? 29 and 6?

How many are 7 and 7? 7 and 47? 87 and 7? How many are 7 and 8? 7 and 58? 28 and 7? How many are 7 and 9? 69 and 7?

How many are 8 and 8? 8 and 78? 18 and 8? How many are 8 and 9? 8 and 99? 68 and 9? 69 and 8?

How many are 9 and 9? 9 and 59? 79 and 9?

How many are 10 and 2? 40 and 2? 6 and 10? 6 and 60? 10 and 8? 90 and 8? 10 and 9? 9 and 100? 30 and 3?

---

1. There are twenty-nine girls in one class, and eight in another; how many in both?

2. How many apple-trees have I on my farm, if there are 27 in one field and 6 in another?

3. A half dollar is worth fifty cents, and a dime ten cents. How much are both worth?

4. Nine pigeons join a flock of thirty-eight. How many does the flock then contain?

5. Sixteen roses in one bouquet, and eight in another, make how many in both?

LESSON XXXVIII.

Read the following numbers in turn. Add aloud (not on the slate), as shown on page 36.

(1)	(2)	(3)	(4)
546	145	834	689
3063	2083	1045	1989
789	1978	626	3754
4261	939	3997	1965
825	1987	1698	876
9484	7132	8200	9273

Some examples for the slate follow. Be sure to set units under units, tens under tens, &c.

1. Add ninety-nine; eighty-seven; fifty-six; twenty-four; and one hundred and eight.

2. Add four hundred and fifty; nineteen; eight thousand six hundred and nine; seven hundred and twenty-three; and eighty-four.

3. Add two thousand four hundred and twenty-one; nine hundred and eighty-seven; eighteen hundred and ninety-nine; three thousand and sixteen; nine hundred and ninety-nine.

4. Add three thousand and eight; nine hundred and ninety; seventeen hundred and fifty-six; five hundred and ninety-seven; two thousand eight hundred and eighty-eight.

What is Numeration? What is Notation? What is Addition?

LESSON XXXIX.

Two pigeons were on the ground. One has flown away; how many are left?

Two cows were standing near a pond. One of them has gone into the water; how many are left on the bank?

Take 1 from 2, and what is left?

What is this process called?

Ans. **Subtraction.**

What is Subtraction?

Ans. Subtraction is the process of taking one number from another.

When we count *one*, *two*, *three*, *four*, &c., how do we get each number?

Ans. By *adding* 1 to the number going before.

When we count backward, *ten*, *nine*, *eight*, &c., how do we get each number?

Ans. By *subtracting* 1 each time from the number going before.

Count backward from 100 to 1.

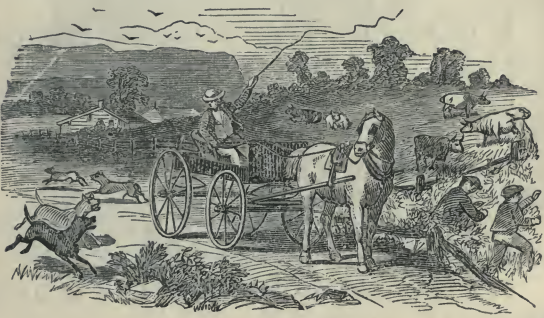
1 from 1 leaves 0.	1 from 6 leaves 5.
1 from 2 leaves 1.	1 from 7 leaves 6.
1 from 3 leaves 2.	1 from 8 leaves 7.
1 from 4 leaves 3.	1 from 9 leaves 8.
1 from 5 leaves 4.	1 from 10 leaves 9.

LESSON XL.

What is Subtraction?

When we take one number from another, what is the result called?

Ans. The **Remainder.**



Three boys were riding. Two got out to gather berries; how many were left in the wagon?

Four dogs ran barking after the wagon. Two have turned back; how many are left there?

Five cows were standing in a field. Two have lain down; how many remain standing?

---

2 from 2 leaves 0.	2 from 7 leaves 5.
2 from 3 leaves 1.	2 from 8 leaves 6.
2 from 4 leaves 2.	2 from 9 leaves 7.
2 from 5 leaves 3.	2 from 10 leaves 8.
2 from 6 leaves 4.	2 from 11 leaves 9.

LESSON XLI.

Which of two numbers must we take from the other, to find their difference?

Ans. We must take the *less* from the *greater*.

---

1. Susan has six apples, and gives away two; how many has she left?

2. If John has ten marbles, and loses one, how many has he then?

3. A man having five sheep, sold one; how many remained unsold?

4. Mary gives a beggar two cakes. She had nine before; how many has she left?

5. If there are two boys in a class of seven children, how many girls are in the class?

6. 2 from 4 leaves how many? 2 from 24? 2 from 54? 2 from 74?

7. Two from 6, how many? 2 from 96?

8. Two from 8, how many? 2 from 48? 2 from 78? 2 from 38?

Commencing with 50, give the numbers obtained by subtracting 2 each time. Thus: 50, 48, 46, 44, 42, 40, 38, 36, 34, 32, 30, &c.

EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
From	98	891	437	1652	7234
Take	12	120	121	212	2112
Remainder					

LESSON XLII.

What is Subtraction? What is the result obtained by Subtraction called?

There are 4 panes of glass in this barn window. If 3 are broken, how many are unbroken?

There were five sheep in the barn-yard, but three have gone into the field. How many remain? Count them in the picture.

Nine chickens were on the ground; 3 have gone to roost. How many are left on the ground?

3 from 3 leaves 0.	3 from 8 leaves 5.
3 from 4 leaves 1.	3 from 9 leaves 6.
3 from 5 leaves 2.	3 from 10 leaves 7.
3 from 6 leaves 3.	3 from 11 leaves 8.
3 from 7 leaves 4.	3 from 12 leaves 9.

LESSON XLIII.

Take four oxen from four oxen, and how many are left? Cover four over, and count the rest.

Take four eggs from a nest containing five, and how many remain? Cover 4, and count the rest.

Here is a knife with six blades. If 4 of them are closed, how many are open? 4 from 6 leaves how many?

Here are seven flowers on one stem, but four are broken; how many are unbroken?

✲✲✲✲ ✲✲✲✲ From eight stars take four stars; how many are left?

A lady having nine wine glasses, broke four of them; how many had she left?

Four from ten leaves how many? |||||| ||||

4 from 4 leaves 0.	4 from 9 leaves 5.
4 from 5 leaves 1.	4 from 10 leaves 6.
4 from 6 leaves 2.	4 from 11 leaves 7.
4 from 7 leaves 3.	4 from 12 leaves 8.
4 from 8 leaves 4.	4 from 13 leaves 9.

LESSON XLIV.

1. Three from 7 leaves how many? 3 from 17? 3 from 37? 3 from 67? Three from 8 leaves how many? 3 from 88? 3 from 98? 3 from 28?

2. Three from 9 leaves how many? 3 from 79?

3. Three from ten leaves how many? Three from twenty? 3 from 30? 3 from 40? 3 from 50?

4. Commencing with 60, give the numbers obtained by subtracting 3 each time. Thus: 60, 57, 54, 51, 48, 45, 42, 39, &c.

5. Twelve things make a dozen. If Jane buys a dozen needles, and gives away 3, how many does she keep? If she loses 3 of these, how many has she then?

6. A boy spends four cents; how much has he left, if he had twelve cents at first?

7. Amy is four years younger than Lucy, and Lucy is 13; how old is Amy?

8. If there are eleven persons in an omnibus, and three get out, how many remain? If four more get out, how many then are left?

Read these numbers. Write them down on your slate. Subtract, and read the remainders.

	(9)	(10)	(11)	(12)	(13)
From	647	983	1085	4293	7658
Take	434	423	1043	4131	3343

LESSON XLV.

Is 4 greater or less than 5? |||| |||||
Can we subtract five from four?
Can we subtract five from five?

If we take five dolls away from five dolls, how many are left? Try and see.

Whenever we subtract a number from itself, as 5 from 5, what is the remainder?

Ans. Nothing, or naught—0.

Five marks from ten marks leave how many marks? Cover five, and count the rest.

Five marks from twenty marks leave how many marks?

Five from thirty leaves how many?

5 from 40? 5 from 50? 5 from 60?

James had 6 books on his table; 5 have fallen down. How many are left on the table?

5 from 5 leaves 0.	5 from 10 leaves 5.
5 from 6 leaves 1.	5 from 11 leaves 6.
5 from 7 leaves 2.	5 from 12 leaves 7.
5 from 8 leaves 3.	5 from 13 leaves 8.
5 from 9 leaves 4.	5 from 14 leaves 9.

LESSON XLVI.

1. Thirteen persons were dining together. Four got up and left; how many remained?

2. Maud is seven years old; her brother is five. Which is the older, and how much?

3. A man who had fourteen cents in his pocket, gave away all but five to beggars. How much did he give away?

4. Twelve persons were standing near a boiler which burst. Two were killed, and three were injured; how many were unhurt?

5. If I borrow eleven dollars, and pay back four, how many do I owe?

6. Five from eight leaves how many? 5 from 18? 5 from 28? 5 from 38? 5 from 48?

7. Five from nine leaves how many? 5 from 69? 5 from 89? 5 from 79? 5 from 99?

8. If a boy who has thirty-seven hens, sells four, how many has he left?

9. A certain boat holds 19 persons. If five are in it, how many empty seats are there?

10. Five from 10 leaves how many? 5 from 5?

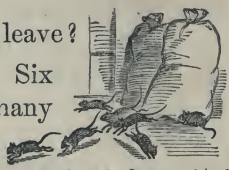
EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
From	937	8165	4397	6028	5984
Take	425	5054	2154	4014	5234

LESSON XLVII.

What is the smallest number that we can subtract 6 from?

How many does 6 from 6 leave?



Look at these seven mice. Six are running away; how many remain?

Six from 7 leaves how many? 6 from 17? 6 from 27? 6 from 47? 6 from 67?

This wheel has eight spokes. Six of them are whole; how many are broken? Count and see.

Six from 8 leaves how many? 6 from 38? 6 from 58? 6 from 78? 6 from 98?

Take six forks away from nine forks, and how many are left?

* * * * * * * * * * * * * * * * Six stars from ten stars leave how many stars?

| | | | | | | Six marks from eleven marks leave how many marks?

6 from 6 leaves 0.	6 from 11 leaves 5
6 from 7 leaves 1.	6 from 12 leaves 6.
6 from 8 leaves 2.	6 from 13 leaves 7
6 from 9 leaves 3.	6 from 14 leaves 8
6 from 10 leaves 4.	6 from 15 leaves 9.

LESSON XLVIII.

What is Subtraction? What is the answer to a question in Subtraction called?

What is the smallest number that we can subtract 7 from?

How many does seven from seven leave? 7 from 27? 7 from 97? 7 from 57? 7 from 37?

Eight fingers on two hands. If seven of them are held up straight, how many will be bent down?

How many does seven from eight leave? 7 from 18? 7 from 88? 7 from 68? 7 from 48? 7 from 58?

Here we have nine rings on a string. If you cover 7 with your hand, how many will you see?

Seven from 9 leaves how many? 7 from 79?

Ten bees are flying round a hive. If 7 are on one side, how many are on the other? Count and see.

Seven from ten leaves how many?

---

7 from 7 leaves 0.	7 from 12 leaves 5.
7 from 8 leaves 1.	7 from 13 leaves 6.
7 from 9 leaves 2.	7 from 14 leaves 7.
7 from 10 leaves 3.	7 from 15 leaves 8.
7 from 11 leaves 4.	7 from 16 leaves 9.

LESSON XLIX.

1. There were thirteen lights in a street. Six are blown out; how many are left burning?

2. Henry broke 7 teeth out of a comb. How many teeth were left, if there were 27 at first?

3. How many sugar-plums would you have to put with nine, in order to make fifteen?

4. If a boy has eleven almonds, and eats all but seven, how many does he eat?

5. A blind man received eight cents from one kind boy, and four from another. If he spent six cents on his way home, how many had he left?

EXAMPLES FOR THE SLATE.

1. From ninety-seven subtract seventy-six.

2. Take six thousand and seventeen from eight thousand three hundred and forty-eight?

3. From five thousand and seventy-two take three thousand and twenty-two.

4. A man having ninety-one dollars, bought a coat for twenty dollars; how much had he left?

5. A ship with six hundred and sixty-nine passengers on board was wrecked. Four hundred and sixteen escaped; how many were lost?

6. A gale swept over a garden containing eighty-seven bean-poles. Seventy-six were blown down; how many remained standing?

LESSON LIII.

From	652
Take	379

Look at this example. The lower number is the smaller; hence it can be taken from the upper.

Always begin to subtract at the right.

9 from 2.—We can not take 9 from 2, because 9 is greater than 2. So we add 10 to the 2, making it 12. 9 from 12 leaves 3. Write down 3 for the first figure of the remainder.

Now, to balance the 10 units just added to 3 in the upper line, add 1 ten to the 7 tens in the lower line,—making 8. Subtract 8.

8 from 5.—We can not take 8 from 5. So add 10 to the 5, making it 15. 8 from 15 leaves 7. Write down 7 for the second figure of the remainder.

To balance the 10 just added to the 5 tens in the upper line, add 1 hundred to the 3 hundreds in the lower line,—making 4. Subtract 4.

4 from 6 leaves 2. Write down 2 for the third figure of the remainder. Answer, 273.

How, then, are we to proceed, when the lower figure is greater than the one above it?

Ans. When the lower figure is greater than the one above it, we add 10 *to the upper figure, subtract, and then add* 1 *to the next lower figure.*

LESSON LII.

1. A jar of lard weighed seventeen pounds. If the jar weighed eight pounds, what was the weight of the lard?

2. I bought a dozen eggs, but eight of them were bad. How many were good?

3. Sixteen boys went a skating. If nine of them fell on the ice, how many escaped falling?

4. A farmer had eighteen cows. Four of them died, and he sold five; how many were left?

5. Nine lemons fell from a tree on which thirteen were growing. How many remained?

6. A fisherman who had seventeen lobsters, sold six in the morning and two in the afternoon. How many had he left?

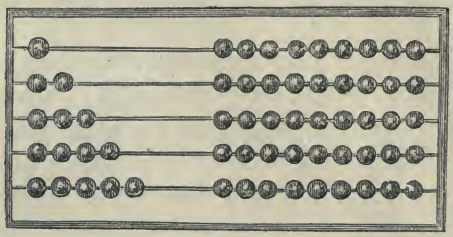
7. A boy having fourteen dollars in the bank, drew out all but eight. How much did he draw out?

EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
From	18	873	5268	9145	8460
Take	9	721	1045	8043	6250

	(6)	(7)	(8)	(9)	(10)
From	17	921	2397	5679	4396
Take	8	721	1163	4645	3291

LESSON LI.



Here is a frame with wires stretched across it, and each wire runs through balls.

Count the balls on the top wire. How many are there in all? Now, if from these 10 balls, we push away 9 to the right, how many are left?

How many balls on the second wire? Push away 9, and how many are left?

How many balls on the third wire? Cover 9 with your finger, and how many do you see?

How many balls on the fourth wire? Cover 9 over, and how many can you count?

How many balls on the fifth wire? Cover 9 over, and how many are left?

---

9 from 9 leaves 0.	9 from 14 leaves 5.
9 from 10 leaves 1.	9 from 15 leaves 6.
9 from 11 leaves 2.	9 from 16 leaves 7.
9 from 12 leaves 3.	9 from 17 leaves 8.
9 from 13 leaves 4.	9 from 18 leaves 9.

LESSON L.

What is the smallest number that we can take 8 from?

How many does eight from eight leave? 8 from 108? 8 from 68? 8 from 18? 8 from 58?

Nine marbles were placed in the centre of a ring. The first boy that shot, drove eight away from the centre; how many were left there?

8 from 9 leaves how many? 8 from 29?

Ten trees were set out thus. If 8 afterwards died, how many remained? Cover 8 over, and count the rest. 8 from 10 leaves —.

o o o o
o o
o o o o

Eleven spiders were on a wall, but eight have crawled down. How many remain there? 8 from 11 leaves how many?

Take eight rings from twelve rings, and how many will be left?

OO OOOO
OO OOOO

---

8 from 8 leaves 0.	8 from 13 leaves 5.
8 from 9 leaves 1.	8 from 14 leaves 6.
8 from 10 leaves 2.	8 from 15 leaves 7.
8 from 11 leaves 3.	8 from 16 leaves 8.
8 from 12 leaves 4.	8 from 17 leaves 9.

LESSON LIV.

EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
From	752	8364	9017	3429	8560
Take	479	2192	4108	3173	6936

	(6)	(7)	(8)	(9)	(10)
From	416	5832	7411	8267	6059
Take	273	1988	4143	3479	3421

11. There were seven hundred and five fish in a net. But, in drawing the net, ninety-six were lost; how many fish were caught?

12. Charles bought some meat for thirty-nine cents. He gave the butcher half a dollar (worth fifty cents). How much change did he get?

13. A man who had four thousand and ten dollars, gave his son two thousand seven hundred and eight dollars. How much did he keep?

14. A farmer sold eight hundred and twenty-five acres of land. How many had he left, if his farm contained a thousand acres at first?

15. Fanny had a present of a box containing 144 pens. If she used thirty-nine of them in a month, how many had she left?

16. A drover sold 87 head of cattle out of a drove of 250. How many had he left?

LESSON LV.

MENTAL EXERCISES.

1. A car started with 40 passengers. At the first station, 10 passengers got off and 3 got on. How many did it then contain?

2. A rose-bush had 82 roses on it. The next day, 6 of these roses fell to pieces, and 9 new ones opened. How many were then on the bush?

3. Leaving home with a hundred dollars in my purse, I spent five for a vest, five for a coat, and five for boots. How much had I left?

4. Said Dick to Stephen, "Give me your nine chickens, and I shall have seventy-eight." How many chickens had Dick?

5. A man rode 90 miles in 4 days. The first day he went 70 miles; the second day, 10; the third day, 5. How far did he go the fourth day?

6. Subtract the sum of 70, 10, and 5, from 90.

7. If Julia is twenty-three years old, and her brother is twenty-nine, what is the difference in their ages?

8. Six, and five, and nine, and how many more, make twenty-eight?

9. A man who had twenty cents, met five poor boys, and gave them each three cents. How many cents had he left?

10. From 20 take the sum of 3, 3, 3, 3, and 3.

LESSON LVI.

What does *once* mean? *Ans. One time.*

What does *twice* mean? *Ans. Two times.*

One bird, taken once, is one bird. Twice one bird is how many birds?

Two birds, taken once, are two birds. Twice two birds are how many birds?

What is taking a number one or more times called?

Ans. **Multiplying.**

Taking a number once is multiplying by 1.
Taking a number twice is multiplying by 2.
Taking a number 3 times is multiplying by 3.

Multiplying is a short way of doing what?

Ans. Of adding a number to itself. Thus:—

Twice 1 is 2.	1 and 1 are 2.
Three times 1 is 3.	1 and 1 and 1 are 3.

When we multiply, what is the result called?

Ans. The **Product.** When we say *Twice one is two*, 2 is the product.

What is Multiplication?

Ans. **Multiplication** is the process of taking a number a certain number of times.

LESSON LVII.

One swan, taken once, is one swan. Once 1 is 1. If 1 is multiplied by 1, what is the product?

Two ducks, taken once, are two ducks. Once 2 is 2. If 2 is multiplied by 1, what is the product?

*** How many do three stars, taken once, make? How much is once 3? If 3 is multiplied by 1, what is the product?

How many do four eggs, taken once, make? How much is once 4? If 4 is multiplied by 1, what is the product?

Then, Once 1 is 1. Once 2 is 2. Once 3 is 3. Once 4 is 4. Once any number is the number itself.

Learn the Table forward and backward.

Once 1 is 1.	Once 6 is 6.
Once 2 is 2.	Once 7 is 7.
Once 3 is 3.	Once 8 is 8.
Once 4 is 4.	Once 9 is 9.
Once 5 is 5.	Once 10 is 10.

LESSON LVIII.

EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
Multiply	98	150	742	3018	6932
By	1	1	1	1	1

Twice one deer is how many deer? How much is twice 1?

Twice two trees are how many trees? How much is twice 2?

✲✲✲ Twice three stars are how many stars?
✲✲✲ How much is twice 3?

What is the same as multiplying a number by 2?

Ans. Adding the number to itself.

Twice 1 is 2.	1 and 1 are 2.
Twice 2 is 4.	2 and 2 are 4.

Twice 1 is 2.	Twice 6 is 12.
Twice 2 is 4.	Twice 7 is 14.
Twice 3 is 6.	Twice 8 is 16.
Twice 4 is 8.	Twice 9 is 18.
Twice 5 is 10.	Twice 10 is 20.

LESSON LIX.

0, taken any number of times, is still 0.

Twice 0 is 0. 3 times 0 is 0. 4 times 0 is 0.

Now you have some examples for the slate. Read the numbers multiplied, and the products.

	(1)	(2)	(3)	(4)	(5)
Multiply	34	121	520	4213	3004
By	2	2	2	2	2

6. How much is twice four hundred and three?

7. Multiply two thousand one hundred and eleven by two.

8. If two thousand three hundred and forty-one is multiplied by two, what is the product?

9. How much is once seventy-six?

10. Multiply four thousand and thirteen by 2.

11. What is the product of one and two thousand seven hundred?

12. How much is twice five hundred and thirty-two?

13. Multiply twelve hundred by two.

3 times 1 is 3.	3 times 6 is 18.
3 times 2 is 6.	3 times 7 is 21.
3 times 3 is 9.	3 times 8 is 24.
3 times 4 is 12.	3 times 9 is 27.
3 times 5 is 15.	3 times 10 is 30.

LESSON LX.

1. If a cord of wood costs five dollars, what will three cords cost?

MODEL.—If 1 cord costs 5 dollars, 3 cords will cost 3 times 5 dollars, or 15 dollars. Answer, 15 dollars.

Follow this model in all the mental exercises under Multiplication.

2. What will two books cost, at a dollar each?

3. How much will a clerk, who gets eight dollars a week, earn in three weeks?

4. At 10 dollars each, what will 2 desks cost?

5. A man gave two beggars nine cents apiece; how much did he give them both?

6. If one woman can make three dresses in a week, how many dresses can three women make?

7. I have two classes, each containing seven boys; how many boys do both contain?

8. If a barrel of flour lasts a family nine weeks, how long will three barrels last them?

9. When oranges are worth two cents apiece, and lemons one cent, what will I have to pay for three oranges and two lemons?

---

4 times 1 is 4.	4 times 6 is 24.
4 times 2 is 8.	4 times 7 is 28.
4 times 3 is 12.	4 times 8 is 32.
4 times 4 is 16.	4 times 9 is 36.
4 times 5 is 20.	4 times 10 is 40.

LESSON LXI.

If one girl can pick five quarts of berries in a morning, how many quarts can four girls pick?

2. There are four fingers on one hand; how many are there on four hands?

3. How many days are there in four weeks, there being seven days in one week?

4. What will 4 combs cost, at 10 cents apiece?

5. If one horse eats 8 quarts of oats in a day, how much will 4 horses eat at the same rate?

6. A father gave each of his 4 sons 3 dollars; how much did he give them in all?

7. If one stage holds 9 men, how many men will 4 such stages hold?

Commencing with 5, give the numbers formed by adding 5 each time. Thus: 5, 10, 15, 20, 25, 30, &c.

5 times 1 is 5.	5 times 6 is 30.
5 times 2 is 10.	5 times 7 is 35.
5 times 3 is 15.	5 times 8 is 40.
5 times 4 is 20.	5 times 9 is 45.
5 times 5 is 25.	5 times 10 is 50.

LESSON LXII.

How much is 5 times 4? How much is 4 times 5? Which is the greater?

How much is 5 times 3? How much is 3 times 5? Which is the greater?

In finding the product of two numbers, does it matter which we multiply by?

1. How many miles will a horse trot in 5 hours, if he trots 10 miles an hour?

2. If Henry reads 5 books every week, how many will he read in 5 weeks?

3. What are 5 pounds of pork worth, at 9 cents a pound?

4. How many trees are there in 5 rows, containing 6 trees each?

5. Louise writes 2 pages every day; how many pages does she write in 5 days?

6. There are 5 cages in the Museum, with 8 monkeys in each; how many monkeys in all?

7. Ned went 5 times to the station, and took 1 letter each time; how many did he take in all?

6 times 1 is 6.	6 times 6 is 36.
6 times 2 is 12.	6 times 7 is 42.
6 times 3 is 18.	6 times 8 is 48.
6 times 4 is 24.	6 times 9 is 54.
6 times 5 is 30.	6 times 10 is 60.

LESSON LXIII.

How much is 6 times 2? How much is twice 6? Which is greater?

Which is greater, 6 times 4 or 5 times 5?

Which is greater, 6 times 2 or 3 times 4?

1. Walking three miles an hour, how far will a man go in six hours?

2. If one box of tea lasts a family six months, how long will six boxes last them?

3. How many dollars are there in six bags, containing seven dollars each?

4. One eagle is worth ten dollars. How many dollars are six eagles worth?

5. How far will we get from Albany, sailing 6 hours in a boat that goes 9 miles an hour?

6. Jane and her five sisters have each a canary bird. How many birds have they all?

7. How many flowers are there in 6 nosegays, if each contains 8 flowers?

8. Six pin-cushions, with five pins in each, will contain how many pins in all?

---

7 times 1 is 7.	7 times 6 is 42.
7 times 2 is 14.	7 times 7 is 49.
7 times 3 is 21.	7 times 8 is 56.
7 times 4 is 28.	7 times 9 is 63.
7 times 5 is 35.	7 times 10 is 70.

LESSON LXIV.

1. How many panes of glass are there in 7 windows, containing 8 panes each?

2. If a boy spends four cents a day, how much will he spend in a week, which contains 7 days?

3. One fly has two wings; how many wings have seven flies?

4. What will 7 rings cost, at 9 dollars each?

5. How many pages will Ella read in seven days, if she reads seven every day?

6. How many dollars in seven eagles, allowing ten dollars to the eagle?

7. How many boats pass a draw-bridge in 7 days, if five boats go through each day?

8 times 1 is 8.	8 times 6 is 48.
8 times 2 is 16.	8 times 7 is 56.
8 times 3 is 24.	8 times 8 is 64.
8 times 4 is 32.	8 times 9 is 72.
8 times 5 is 40.	8 times 10 is 80.

LESSON LXV.

1. If these boys skate four miles an hour, how many miles will they skate in 8 hours?

2. Twice every day Fred and Frank come with their sleds, to ride down hill. How many times do they come in eight days?

3. If it takes 3 hours to cut a ton of ice from the pond, how long will it take to cut 8 tons?

4. One day 8 sleigh-loads, of 9 persons each, came to the pond; how many persons came?

5. What will eight loads of evergreens cost, at six dollars a load?

9 times 1 is 9.	9 times 6 is 54.
9 times 2 is 18.	9 times 7 is 63.
9 times 3 is 27.	9 times 8 is 72.
9 times 4 is 36.	9 times 9 is 81.
9 times 5 is 45.	9 times 10 is 90.

LESSON LXVI.

	(1)	(2)	(3)	(4)	(5)	(6)
Multiply	41	21	90	81	70	621
By	5	6	7	8	9	4
	205					2484

7. Which is greater, 9 times 4 or 7 times 5?

8. How many legs has one chair? How many legs, then, will nine chairs have?

9. How many fingers has one boy? How many fingers, then, will nine boys have?

10. Ada's father gives her and her 8 brothers 6 cents each. How much does he give them all?

11. I have five hens, and each hen has nine chickens. Hens and chickens, how many have I?

12. How much will nine turkeys weigh, if their weight is eight pounds apiece?

13. There are nine chains, each six feet long. What is the length of the whole nine?

14. How many gallons in 9 ten-gallon casks?

Repeat the even tens: 10, 20, 30, 40, 50, &c.

10 times 1 is 10.	10 times 6 is 60.
10 times 2 is 20.	10 times 7 is 70.
10 times 3 is 30.	10 times 8 is 80.
10 times 4 is 40.	10 times 9 is 90.
10 times 5 is 50.	10 times 10 is 100.

LESSON LXVII.

1	2
10	10
10	20

What is an easy way of multiplying a number by 10?

Ans. Placing a naught after it?

1. Write down these numbers; multiply them by 10 in the way just shown:—

Eight hundred and forty-seven.
Six hundred and seventy-nine.
Two hundred and thirteen.
Seven hundred and five.
Thirty-three. Nineteen. Fifty-one.

2. Ten cents make a dime; ten dimes make a dollar. How many cents, then, in a dollar? How many cents are seven dimes worth?

3. If you can buy two apples for a cent, how many can you get for ten cents?

4. Ann is five years old. If she lives to be ten times as old, what will be her age?

5. How many quarts will ten jars contain, if each holds three quarts?

6. At 3 cents each, what will 10 oranges cost?

7. There are nine inches in a quarter of a yard; how many inches in ten quarters?

8. If for ten days you get four good marks each day, how many do you get in all?

Review all the Tables, from page 60, till you can say them perfectly.

LESSON LXVIII.

Multiply	734
By	6

Look at the above example. Always begin to multiply at the right.

6 times 4 is 24—4 units and 2 tens. Write the 4 units in the units' place, and add the 2 tens to the next product.

6 times 3 tens are 18 tens, and 2 tens are 20 tens—or 2 hundreds. Write 0 in the tens' place, and add 2 hundreds to the next product.

6 times 7 hundreds are 42 hundreds, and 2 hundreds are 44 hundreds. Answer, 4404.

When, in multiplying by a single figure, we get a product expressed by two figures, what must we do with them?

Ans. We must place the right-hand figure of the product under the figure multiplied, and add the left-hand figure to the next product.

If 36 is your product, what do you do with each figure? If 63? If 72?

Examples follow; multiply as shown above.

Multiply	863	638	742	914
By	4	5	7	9
	3452	3190	5194	8226

LESSON LXIX.

What is Numeration? What is Notation? What is Addition? What is Subtraction? What is Multiplication?

EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
Add	987	846	869	1752	789
	236	155	456	990	2789
	795	383	978	2671	789
	121	353	519	2532	2789
	143	625	780	898	1789
	422	831	659	1098	339

	(6)	(7)	(8)	(9)	(10)
From	96	410	863	1002	3507
Take	38	307	264	109	1238

	(11)	(12)	(13)	(14)	(15)
Multiply	81	72	39	160	263
By	3	6	2	8	4

	(16)	(17)	(18)	(19)	(20)
Multiply	72	90	85	698	549
By	5	10	7	10	9

LESSON LXX

What is the result, or answer, called in Addition? What, in Subtraction? What, in Multiplication?

1. What is the sum of four hundred and sixty-one, five hundred and eighty-four, and seven hundred and two?

2. What is the product of eight hundred and seventy-two, and nine?

3. If forty-six is taken from eight thousand and twenty-nine, what is the remainder?

4. How many pages in nine books, if each book has two hundred and eighty-eight pages?

5. One book has four hundred and fifty pages; another has two hundred and sixty-four. How many pages have both books together? How many more pages has one than the other?

6. If a man reads forty-nine books every year, how many will he read in ten years?

7. A gardener set out a hundred and nineteen trees every week for five weeks. If 95 out of the whole number died, how many lived?

8. Maud's uncle left his whole property to her and her five brothers, giving them each one thousand and fifty dollars. What was he worth in all?

9. Multiply a thousand and twelve by eight.

LESSON LXXI.

509
18
4072
509
9162

Multiply 509 by 18. Let us see how we are to multiply by two figures.

Write 18 under 509, units under units, tens under tens.

18 consists of 8 units and 1 ten. We therefore multiply first by 8 units, and then by 1 ten, and add the two products.

Multiplying by 8 units, as already shown, we get 4072 for the product.

Now multiply by 1 ten. Once 9 is 9. Write it *in the tens' place*, because you are multiplying by 1 *ten*, not 1 *unit*. Once 0 is 0. Once 5 is 5. The product is 509 *tens*.

Now add the two products. Answer, 9162.

When multiplying by a figure in the tens' place, write the first figure of the product in the tens' place.

In finding the product of two numbers, multiply by the one that has the fewer figures.

Examples follow; multiply as shown above.

Multiply	87	260	159
By	24	38	56
	348	2080	954
	174	780	795
Product	2088	9880	8904

LESSON LXXII.

When 0 occurs in the number you multiply by, how do you proceed?

Ans. Bring down the 0, and go on multiplying by the next figure, all in the same line.

Multiply 97 by 30.

Bring down the 0. Then multiply by 3, writing the result in the same line.

```
 97
 30
---
2910
```

3 times 7 is 21. Write 1 in the tens' place, and add 2 to the next product. 3 times 9 is 27, and 2 are 29. Answer, 2910.

What is an easy way of multiplying a number by 100?

Ans. Placing two naughts after it.

How much does 57 multiplied by 100 make?

Multiply 19 by 100. Multiply 100 by 19. Which is the greater?

What is the product of 65 and 100?

EXAMPLES FOR THE SLATE.

	(1)	(2)	(3)	(4)	(5)
Multiply	27	81	90	98	190
By	16	37	24	95	26

	(6)	(7)	(8)	(9)	(10)
Multiply	34	57	68	90	43
By	20	89	50	100	100

LESSON LXXIII.

Two oxen make a yoke. How many yoke will 4 make?

MODEL.—As many yoke as 2 is contained times in 4,—or 2. Answer, 2 yoke.

How many yoke will 6 oxen make?

What is finding how many times one number is contained in another called?

Ans. **Dividing.** Finding how many times 2 is contained in 6, is dividing 6 by 2.

What is meant by dividing 9 by 3?

Ans. Finding how many times 3 is contained in 9.

When we divide, what is the result called?

Ans. The **Quotient.** Two is contained in 6 three times; 3 is the quotient.

When we divide by 1, what is the quotient.

Ans. The same as the number divided. Thus:—

1 in 1, once.	1 in 6, 6 times.
1 in 2, twice.	1 in 7, 7 times.
1 in 3, 3 times.	1 in 8, 8 times.
1 in 4, 4 times.	1 in 9, 9 times.
1 in 5, 5 times.	1 in 10, 10 times.

LESSON LXXIV.

What is Division?

Ans. **Division** is the process of finding how many times one number is contained in another.

What is the result called in Division?

How many times is one apple contained in one apple? In five apples? In ten? In fourteen? In a hundred apples? In a thousand apples?

How many times will 1 go into 3? Into 27?

Divide 415 by 1, and what is the quotient?

How many times is 2 contained in 4? In 6?

Two make a pair. How many pair will 8 rabbits make? Count and see.

How many pair will ten horses make?

2 in 2, once.	2 in 12, 6 times.
2 in 4, twice.	2 in 14, 7 times.
2 in 6, 3 times.	2 in 16, 8 times.
2 in 8, 4 times.	2 in 18, 9 times.
2 in 10, 5 times.	2 in 20, 10 times.

LESSON LXXV.

1. Two make a brace. If a sportsman shoots 20 pheasants, how many brace has he?

MODEL.—He has as many brace as 2 is contained times in 20,—or 10. Answer, 10 brace.

Follow this model in the mental examples in Division.

2. Two make a couple. If a group of 16 boys pair off, how many couples will they make?

3. How many pair will twelve gloves make?

4. If 16 cents are divided equally between two poor men, how many cents will each get?

5. Amy and her sister divided 14 chestnuts equally between them. How many had Amy?

When a thing is divided into two equal parts, each part is called a Half.

What is the half of 14? Of 18?

How many times is 1 contained in 1? 2 in 2?

When we divide any number by itself, what is the quotient? *Ans.* 1.

How many times is 3 contained in 3?

3 in 3, once.	3 in 18, 6 times.
3 in 6, twice.	3 in 21, 7 times.
3 in 9, 3 times.	3 in 24, 8 times.
3 in 12, 4 times.	3 in 27, 9 times.
3 in 15, 5 times.	3 in 30, 10 times.

LESSON LXXVI.

How much is 3 times 2?

How many times is 3 contained in 6? 2 in 6?

1. It takes three lines to form a triangle. How many triangles will twenty-one lines form?

2. How many cents will 15 apples cost, at the rate of 3 for a cent?

3. If we walk three miles an hour, how many hours will it take us to walk twelve miles?

4. If 3 pounds of butter last a family a week, how many weeks will thirty pounds last them?

5. Twenty-four is how many times three?

6. How much is half of 18? How many times 3 is 9?

One half of 18 is how many times 3?

7. One half of 6 is how many times 3?

8. If it takes 3 feet to make a yard, how many yards are there in 27 feet of ribbon?

9. Thomas divided eighteen almonds equally among his three sisters; how many did he give each? How often will 6 go into 18?

4 in 4, once.	4 in 24, 6 times.
4 in 8, twice.	4 in 28, 7 times.
4 in 12, 3 times.	4 in 32, 8 times.
4 in 16, 4 times.	4 in 36, 9 times.
4 in 20, 5 times.	4 in 40, 10 times.

LESSON LXXVII.

Any number is contained in 0, 0 times.

1 in 0, 0 times. 2 in 0, 0 times. 3 in 0, 0 times, &c.

Divide 1208 by 4, on your slate.

Write 4, the number you divide by, at the left of the other number with a line between.

4)1208

In dividing, always commence at the left.

As you find the quotient, write it under the number divided.

4 is not contained in 1. See, then, how many times it is contained in 12, the first two figures.

4 in 12, 3 times. Write 3 under the 2.

4 in 0, 0 times. Write it down.

4 in 8, twice. Write down 2.

4)1208

Ans. 302

Some examples for your slate follow:—

(1)	(2)	(3)	(4)	(5)
4)204	4)808	2)682	2)1020	3)9630
(6)	(7)	(8)	(9)	(10)
1)768	2)168	3)186	3)2109	3)3009

5 in 5, once.	5 in 30, 6 times.
5 in 10, twice.	5 in 35, 7 times.
5 in 15, 3 times.	5 in 40, 8 times.
5 in 20, 4 times.	5 in 45, 9 times.
5 in 25, 5 times.	5 in 50, 10 times.

LESSON LXXVIII.

1. If four wheels are needed for one car, how many cars will twenty-eight wheels supply?

MODEL.—If 4 wheels are needed for one car, 28 wheels will supply as many cars as 4 is contained times in 28,—or 7 cars. Answer, 7 cars.

2. A farmer distributes 40 pigs equally in four pens. How many does he put in each?

3. A man who earns 4 dollars a week, is paid 24 dollars. For how many weeks is he paid?

4. If I place four boys on a bench, how many benches shall I need for thirty-six boys?

5. If 5 oranges are worth as much as 15 apples, how many apples is one orange worth?

6. If five rocking-horses cost forty-five dollars, how much do they cost apiece?

7. How many dresses will 12 yards of ribbon trim, if it takes 4 yards to trim one dress?

8. Four pecks make a bushel; how many bushels will 16 pecks make?

9. If one pew holds five persons, how many pews will it take to hold thirty persons?

---

6 in 6, once.	6 in 36, 6 times.
6 in 12, twice.	6 in 42, 7 times.
6 in 18, 3 times.	6 in 48, 8 times.
6 in 24, 4 times.	6 in 54, 9 times.
6 in 30, 5 times.	6 in 60, 10 times.

LESSON LXXIX.

EXAMPLES FOR THE SLATE.

1. Divide twelve hundred by 4. Divide it by 6. Divide it by 3.

2. Divide two thousand five hundred and five by five.

3. Divide four thousand eight hundred and sixty by six. Divide it by two.

4. How many times is five contained in thirty-five hundred and fifty-five?

5. How many times is six contained in three thousand six hundred and six?

6. If two thousand dollars be divided equally among five persons, how much will each get?

7. If four hundred and twenty books are distributed equally on six shelves, how many will there be on each shelf?

8. If four hundred soldiers are divided into 5 companies, how many will there be in each?

9. If four partners together make two thousand dollars in one year, how much is that apiece?

---

7 in 7, once.	7 in 42, 6 times.
7 in 14, twice.	7 in 49, 7 times.
7 in 21, 3 times.	7 in 56, 8 times.
7 in 28, 4 times.	7 in 63, 9 times.
7 in 35, 5 times.	7 in 70, 10 times.

LESSON LXXX.

1. Ruth is sent to divide 18 cakes equally among her 6 sisters. How many must she give each?

2. How many classes of six scholars each can be formed out of fifty-four scholars?

3. Allowing six candles to the pound, how many pounds are there in thirty-six candles?

4. How many books can be made out of 60 sheets of paper, if it takes 6 sheets to make one book?

5. Paul has 4 cents, and Rose has 20. They put their money together, and divide it equally among 6 poor girls. How much does each girl get?

6. If one horse can draw as much as 7 men, how many horses will draw as much as 56 men?

7. How many weeks of 7 days each are there in 49 days?

8. I am 63 years old, and am just 7 times the age of my son. How old is my son?

9. Seven times two is how many times seven?

8 in 8, once.	8 in 48, 6 times.
8 in 16, twice.	8 in 56, 7 times.
8 in 24, 3 times.	8 in 64, 8 times.
8 in 32, 4 times.	8 in 72, 9 times.
8 in 40, 5 times.	8 in 80, 10 times.

LESSON LXXXI.

These eight boys are having a fine sail.

If they are charged 40 cents for the boat, how much will each have to pay?

If they catch 24 fish and divide them equally, how many will each get?

If they have 16 apples, how many will there be for each boy?

How many times eight is the half of 16?

---

9 in 9, once.	9 in 54, 6 times.
9 in 18, twice.	9 in 63, 7 times.
9 in 27, 3 times.	9 in 72, 8 times.
9 in 36, 4 times.	9 in 81, 9 times.
9 in 45, 5 times.	9 in 90, 10 times.

LESSON LXXXII.

EXAMPLES FOR THE SLATE.

1. If one stage-coach will hold 9 passengers, how many such coaches will it take to hold ninety-nine passengers?

2. How many nine-gallon jars will it take to hold two hundred and seventy gallons?

3. If a family use nine pounds of coffee in a month, how long will one hundred and eighty-nine pounds last them?

4. How many sets of 9 volumes each can be made up out of nine thousand and ninety volumes?

5. If three thousand two hundred and eight dollars be divided among eight heirs, how many dollars will each receive?

6. If there are eight panes of glass in one window, how many windows will four hundred and eighty-eight panes supply?

7. Divide eight thousand one hundred by 9.

Write down the even tens up to 100:—10, 20, 30, &c.

10 in 10, once.	10 in 60, 6 times.
10 in 20, twice.	10 in 70, 7 times.
10 in 30, 3 times.	10 in 80, 8 times.
10 in 40, 4 times.	10 in 90, 9 times.
10 in 50, 5 times.	10 in 100, 10 times.

LESSON LXXXIII.

What is Numeration? What is Notation?
What is Addition? What is Subtraction?
What is Multiplication? What is Division?
What is the result, or answer, called in Addition? What in Subtraction? What in Multiplication? What in Division?

1. Ten cents make a dime. How many dimes in fifty cents?
2. Ten dimes make a dollar. How many dollars in eighty dimes?
3. Ten dollars make an eagle. How many eagles in thirty dollars?
4. How many companies of ten men each can be formed out of ninety men?
5. Charles has 7 dollars, and Robert 3. They put their money together, and buy ten turkeys. What do the turkeys cost apiece?
6. A man riding 10 miles an hour, travels 20 miles. How many hours is he on the way?
7. If ten omnibus tickets cost 60 cents, what does one ticket cost?

EXAMPLES FOR THE SLATE.

(1)	(2)	(3)	(4)
8)7208	9)7290	9)3699	10)7000

LESSON LXXXIV.

How often is 6 contained in 7?

Ans. It is contained *once;* for 6 in 6, once. It is not contained *twice;* for twice 6 is 12.

Is 6 contained in 7 once exactly?

Ans. No; 6 is contained once exactly in 6. As 7 is one more than 6, we say that 6 goes into 7 *once, and one over.*

How often is 6 contained in 20?

Ans. 6 in 18, 3 times; 18 from 20 leaves 2. Hence 6 goes into 20 *three times, and two over.*

How many times is 3 contained in 26? 4 in 38? 7 in 50? 2 in 21? 8 in 55? 5 in 44?

What is that which is left over called?

Ans. The **Remainder.**

If we come to a figure too small to contain the one we are dividing by, what do we do?

Ans. If it is not the first figure, we write 0 in the quotient.

Divide 3604 by 6.

$$6)\overline{3604}$$

Quotient 600, and 4 remainder.

Divide, as above, on your slate: (1.) 635 by 9. (2.) 563 by 8. (3.) 4089 by 4. (4.) 621 by 2. (5.) 6308 by 3. (6.) 499 by 7. (7.) 4009 by 5.

LESSON LXXXV.

3 2
4) 3901
975, 1 rem.

Divide 3901 by 4. Commence at the left. 4 is not contained in 3. See, then, how often it will go into 39, the first two figures.

4 in 39, 9 times and 3 over. Write 9 under the 9, and prefix the remainder 3, in your mind, to the next figure—making 30.

4 in 30, 7 times and 2 over. Write 7 under the 0, and prefix 2 to the next figure—making 21.

4 in 21, 5 times and 1 over. Place 5 under the 1, and the remainder 1 to the right. Answer: quotient 975, and 1 remainder.

When, before all the figures have been divided, we have a remainder, what must be done with it?

Ans. We must prefix it, in the mind, to the next figure to be divided.

Examples follow; divide as shown above.

(1) 2) 1349 — Quo. 674, 1 rem.

(2) 3) 2904 — Quo. 968

(3) 4) 1762 — Quo. 440, 2 rem.

(4) 5) 2564

(5) 6) 6702

(6) 8) 9679

(7) 9) 4235

LESSON LXXXVI.

Divide 4017 by 10.

10 in 40, 4 times. Write 4 under the 0.

$$10\overline{)4017}$$
$$401, \text{ 7 rem.}$$

10 in 1, 0 times and 1 over. Write 0 under the 1, and prefix 1 to the next figure. 10 in 17, once and 7 over. Write 1 under the 7, and 7 as remainder. Answer, 401 and 7 remainder.

Now compare this answer with the number to be divided—4017. It is the same as if we had cut off the right hand figure for the remainder, and taken the rest for the quotient—401 | 7.

Give, then, an easy rule for dividing by 10.

Ans. Cut off the right-hand figure of the number to be divided for the remainder, and take the other figures for the quotient.

Write the following numbers. Divide them by 10 in the way just shown.

1. Five thousand two hundred and nineteen.
2. Eighteen hundred and sixty-three.
3. Nine thousand and seventy-eight.
4. Eleven hundred and eleven.
5. Four thousand one hundred and forty.
6. Seven thousand two hundred and six.
7. Nine hundred and ninety-four.
8. Eight thousand and one.
9. Nineteen hundred and five.

LESSON LXXXVII.

What sign is used to denote Addition?

Ans. This sign +, called **plus.**

What does 4+5 mean?

Ans. It is read, *four plus five.* It means 4 *added to* 5, and is equal to 9.

When numbers are to be added or subtracted, how must we be sure to write them down?

Ans. So as to bring units under units, tens under tens, &c.

Read the following examples. Write down the numbers, and add them on your slate.

1. 987+76+3665+54+2443. *Ans.* 7225.
2. 752+3953+414+6+1745. *Ans.* 6870.
3. 306+1032+89+567+765.
4. 4+455+2260+1476+7+3488.
5. 8+859+4954+483+1891+10+705.
6. 10+758+655+950+62+969+863+737.
7. 1659+2+2348+9+3299+1028+79+17.
8. 1728+756+1699+789+1967+539+154.

How many tens must we add together, to produce 80? Write them down, and add them.

How many one hundreds must we add, in order to get 1000? Write them down, and add them.

What is the sum of 8 times 10, and 10 times 100?

LESSON LXXXVIII.

What sign is used to denote Subtraction?

Ans. This sign —, called **minus.**

What does 5 — 4 mean?

Ans. It is read *five minus four.* It means 4 *subtracted from* 5, and is equal to 1.

When minus is used, which is the number to be subtracted?

Ans. The one that stands after the minus.

Read the following. Find the remainders.

1. 1829 — 304.	9. 3647 — 1753.
2. 4506 — 2702.	10. 4567 — 2679.
3. 1234 — 899.	11. 7091 — 5132.
4. 4108 — 1053.	12. 5678 — 1679.
5. 2738 — 1374.	13. 9000 — 7889.
6. 2345 — 1779.	14. 6789 — 3289.
7. 2301 — 126.	15. 7890 — 4719.
8. 6456 — 1679.	16. 2006 — 1018.

17. Mr. W. has 2500 dollars in one bank, and 5000 in another. He buys a house for 6000 dollars. If he draws out money enough to pay for it, how much will he have left in bank?

18. How much is 2500 + 5000 — 6000?

19. How much is 1422 + 2578 — 1510?

20. How much is 3761 + 5239 — 999?

LESSON LXXXIX.

What sign is used to denote Multiplication?
Ans. This sign ×.

What does 4×5 mean?
Ans. It means *four multiplied by five*, and is equal to 20.

Which is greater, 4×5 or 5×4?
What is an easy way of multiplying by 10?
What easy way of multiplying by 100?

What is the number to be multiplied called?
Ans. The **Multiplicand.**

What is the number you multiply by called?
Ans. The **Multiplier.**

When the multiplier contains 0, how were you told to proceed?

Read the following. Find the products.

1. 1605 × 6.	10. 62 × 100.
2. 4198 × 2.	11. 396 × 19.
3. 973 × 9.	12. 57 × 80.
4. 861 × 10.	13. 403 × 17.
5. 1284 × 7.	14. 189 × 20.
6. 1066 × 5.	15. 148 × 63.
7. 851 × 8.	16. 82 × 95.
8. 2396 × 4.	17. 25 × 204.
9. 271 × 36.	18. 65 × 90.

LESSON XC.

What sign is used to denote Division?

Ans. This sign ÷.

What does 14 ÷ 7 mean?

Ans. It means *fourteen divided by seven*, and is equal to 2.

When the sign for division stands between two numbers, which is to be divided?

Ans. The one before it is to be divided by the one after it.

What is the number to be divided called?

Ans. The **Dividend.**

What is the number you divide by called?

Ans. The **Divisor.**

What easy rule was given for dividing by 10?

Read the following. Find the quotient and remainder.

1. 8064 ÷ 4.	10. 4713 ÷ 5.
2. 9193 ÷ 3.	11. 6565 ÷ 9.
3. 2709 ÷ 9.	12. 3709 ÷ 8.
4. 4004 ÷ 5.	13. 2723 ÷ 4.
5. 7777 ÷ 2.	14. 3379 ÷ 6.
6. 1941 ÷ 10.	15. 6055 ÷ 3.
7. 1468 ÷ 1.	16. 7327 ÷ 8.
8. 2496 ÷ 7.	17. 5403 ÷ 7.
9. 5684 ÷ 6.	18. 2670 ÷ 10.

LESSON XCI.

PROMISCUOUS MENTAL EXAMPLES.

1. If a man earns 15 dollars a week, and spends 9, how much will he save in 4 weeks? How much in 6 weeks?

First find how much he will save in 1 week, then in 4.

2. Ellen puts aside 3 cents every day for the poor, and James puts aside 5 cents. How much will they both have for the poor in a week?

3. We collect 10 dollars for the poor one day, and 6 the next. If we divide the whole among 4 poor families, how much will each get?

4. Mary reads 2 pages every morning, and 7 every afternoon; how many pages does she read in a week?

5. If 10 peaches fill a quart measure, how many quart measures will 80 peaches fill?

6. A farmer has 3 white hens and 4 black ones. If each hen hatches 4 chickens, how many chickens will the farmer have?

LESSON XCII.

When a thing is divided into 2 equal parts, what is each part called?

Ans. A Half.

How many halves in a whole pear? Count and see.

When a thing is divided into 3 equal parts, what is each part called?

Ans. A Third.

How many thirds in a whole pear?

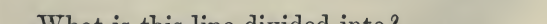
When a thing is divided into 4 equal parts, what is each part called?

Ans. A Fourth, or Quarter.

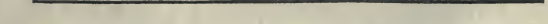
How many fourths, or quarters, in a whole pear? Count and see.

What is this line divided into?

What is this line divided into?



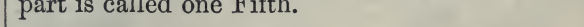
What is this line divided into?



Which is greater, a half, a third, or a fourth? Look at the lines divided above, and see.

LESSON XCIII.

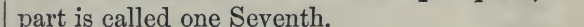
If a whole is divided into 5 equal parts, each part is called one Fifth.



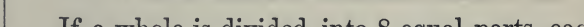
If a whole is divided into 6 equal parts, each part is called one Sixth.

If a whole is divided into 7 equal parts, each part is called one Seventh.

If a whole is divided into 8 equal parts, each part is called one Eighth.



If a whole is divided into 9 equal parts, each part is called one Ninth.



If a whole is divided into 10 equal parts, each part is called one Tenth.

What are such equal parts of a whole called?
Ans. **Fractions.**

Learn how to write these fractions:—

One half	$\frac{1}{2}$	One fifth	$\frac{1}{5}$	One eighth	$\frac{1}{8}$
One third	$\frac{1}{3}$	One sixth	$\frac{1}{6}$	One ninth	$\frac{1}{9}$
One fourth	$\frac{1}{4}$	One seventh	$\frac{1}{7}$	One tenth	$\frac{1}{10}$

LESSON XCIV.

Learn this table :—

2 halves, one whole.	6 sixths, one whole.
3 thirds, one whole.	7 sevenths, one whole.
4 fourths, one whole.	8 eighths, one whole.
5 fifths, one whole.	9 ninths, one whole.

10 tenths, one whole.

Since 2 halves make a whole, to find one half cut the whole into 2 equal parts.

To find half of a number, divide it by 2.

To find $\frac{1}{3}$, divide by 3.	To find $\frac{1}{7}$, divide by 7.
To find $\frac{1}{4}$, divide by 4.	To find $\frac{1}{8}$, divide by 8.
To find $\frac{1}{5}$, divide by 5.	To find $\frac{1}{9}$, divide by 9.
To find $\frac{1}{6}$, divide by 6.	To find $\frac{1}{10}$, divide by 10.

EXAMPLES FOR THE SLATE.

1. What is $\frac{1}{2}$ of 6184? Of 298? Of 336?
2. What is $\frac{1}{3}$ of 369? Of 1482? Of 1578?
3. Find one tenth of 8970. Of 2310. Of 80.
4. What is $\frac{1}{4}$ of 2548? Of 332? Of 380?
5. Find one sixth of 1812. Of 924. Of 342.
6. Find $\frac{1}{5}$ of 2808. Of 6534. Of 4851.
7. Find $\frac{1}{5}$ of 4060. Of 3750. Of 4005.
8. Take $\frac{1}{8}$ of 1752. Of 7008. Of 3224.
9. Take $\frac{1}{7}$ of 5810. Of 3325. Of 693.

LESSON XCV.

Now we must learn about money, weights, &c.

What is the money of the United States called? *Ans.* Federal Money.

TABLE OF FEDERAL MONEY.

Cent.

10 mills make 1 cent.
10 cents, 1 dime.
10 dimes, 1 dollar.
10 dollars, 1 eagle.

Dime.

Eagle.

Eagle.

Besides these, we have other coins:—

Silver.
- The three cent piece, worth 3 cents.
- The half-dime, worth 5 cents.
- The quarter-dollar, worth 25 cents.
- The half-dollar, worth 50 cents.

Gold.
- The quarter-eagle, worth $2\frac{1}{2}$ dollars.
- The half-eagle, worth 5 dollars.
- The double eagle, worth 20 dollars.

LESSON XCVI.

What mark is used to denote dollars?

Ans. This mark $, placed *before* the number.

Twenty dollars is written	$20.
Twenty dollars, six cents, is written	$20.06
Twenty dollars, thirteen cents,	$20.13
Twenty dollars, twelve cents, 1 mill,	$20.121
Twenty dollars, one mill,	$20.001

The first two figures after the period denote cents. The third figure denotes mills.

$60.019 is read sixty dollars, one cent, 9 mills.
$4.502, four dollars, fifty cents, two mills.

Read and add the following. In setting them down, let the periods all range in line.

1. $103.24 + $47.91 + $3008.008 + $546.356.
2. $6000.009 + $652.88 + $1267 + $987.765.
3. $800.81 + $6793.054 + $21.421 + $1896.
4. $9.428 + $4200.919 + $87.75 + $365.56.

5. From eighty-seven dollars, forty cents, five mills, take ten dollars, ninety-one cents. *Ans.* $

$87.405
10.91

6. From nine hundred dollars, take thirty-two dollars, seventy-three cents, five mills.

7. From fifty dollars, seventy cents, take nineteen dollars, one cent, six mills.

LESSON XCVII.

1. A lady buys 7 pounds of meat at 10 cents a pound; how much must she give for it?

If she hands the butcher a dollar bill, how much change must he give her?

2. Robert buys a slate for 10 cents, and a book for 40 cents. He gives the store-keeper half a dollar. How much change must he receive?

3. John buys half of a six cent pie, and hands the baker a dime. How much change will he get?

4. How many cents make a dime? How many cents are 5 dimes worth? 9 dimes? 10 dimes? 1 dollar?

5. How many dollars make an eagle? How many eagles in 40 dollars? In 80 dollars?

6. How many dollars is a half-eagle worth? 2 half-eagles? 5 half-eagles? 10 half-eagles?

7. How many half-dimes are equal to 10 cents? To 30 cents? To 60 cents? To a dollar?

8. I leave home with an eagle in my pocket. I spend $4 in market, and on my way home give 10 beggars a dime each. How much have I left?

9. If a man deposits an eagle in the savings bank every week, how many dollars will he have there in ten weeks?

10. How many dimes in one eagle?

11. If a boy gives a store-keeper a dollar, and gets 25 cents change, how much has he spent?

LESSON XCVIII.

What is the money of Great Britain called?
Ans. English or Sterling Money.

Sovereign.

TABLE OF STERLING MONEY.

4 farthings make	1 penny.
12 pence,	1 shilling.
20 shillings,	1 pound.
21 shillings,	1 guinea.

What mark is used to denote pounds?
Ans. This mark £, placed before the number.

What coin represents 1 pound?
Ans. The sovereign, a gold coin.

How many shillings is 1 sovereign worth?
Ans. Twenty shillings.

Which is worth more, a sovereign or a guinea?

1. How many farthings in 1 penny? In 8 pence? In 10 pence?

2. What part of a penny is a farthing?

3. How many farthings in a half-penny?

4. If I pay 9 shillings for a map, and £1 for a book, which costs the more? How much more?

5. If a boy who has £2 spends half of it, how many shillings has he left?

6. Five beggars received 8 farthings each. How many pence did that make for all five?

LESSON XCIX.

TROY WEIGHT.

What is Troy weight used in weighing?
Ans. Gold, silver, and precious stones.

TABLE.

24 grains make 1 pennyweight.
20 pennyweights, 1 ounce.
12 ounces, 1 pound.

APOTHECARIES' WEIGHT.

By whom is Apothecaries' weight used?
Ans. By apothecaries, in mixing medicines.

TABLE.

20 grains make 1 scruple.
3 scruples, 1 dram.
8 drams, 1 ounce.
12 ounces, 1 pound.

1. A person who has a pound of gold dust, sells 4 ounces of it. How many ounces has he left?

2. How many spoons weighing 10 pennyweights each will it take to make an ounce?

3. How many powders of 5 grains each can a druggist make out of 1 scruple of calomel?

4. How many drams in 2 ounces? In 8 ounces? In 11 ounces?

LESSON C.

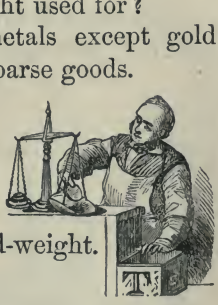
AVOIRDUPOIS WEIGHT.

What is Avoirdupois Weight used for?

Ans. For weighing the metals except gold and silver, groceries, and all coarse goods.

TABLE.

16 drams make,	1 ounce.
16 ounces,	1 pound.
25 pounds,	1 quarter.
4 quarters,	1 hundred-weight.
20 hundred-weight,	1 ton.



1. How many cornucopias holding 4 ounces each can be filled with a pound of candy?

2. How many pounds in a quarter? In a hundred-weight? In 20 hundred-weight? In a ton?

3. How many pounds in 2 tons of coal?

4. Emma weighs just half as much as Charles, and he weighs 80 pounds. What is Emma's weight?

5. If a grocer sells two boys half a pound of cheese each, how many ounces is that in all?

6. If 5 pounds are used out of a quarter of flour, how many pounds are left?

7. If a hundred-weight of pork is divided among 10 men, how many pounds will each have?

LESSON CI.

LONG MEASURE.

For what is Long Measure used?

Ans. For measuring length and distance.

One inch.

Make a line one inch long on your slate.

TABLE.

12	inches make	1 foot.
3	feet,	1 yard.
5½	yards,	1 rod or pole.
40	rods,	1 furlong.
8	furlongs,	1 mile.

1. How many inches long is a yard-stick?

2. A boy who has to walk a mile to town, has gone half the way. How many furlongs has he yet to go?

3. A tall man is 6 feet high. How many yards is that?

4. Allowing a yard to each step, how many feet will a man go in 10 steps?

5. How many rods in a furlong? In 8 furlongs? In a mile?

6. About how many inches wide is this page?

7. How many inches in a quarter of a yard?

LESSON CII.

LIQUID MEASURE.

For what is Liquid Measure used?

Ans. For measuring liquids; such as milk, oil, vinegar, molasses, liquors, &c.

TABLE.

4 gills make	1 pint.
2 pints,	1 quart.
4 quarts,	1 gallon.
31½ gallons,	1 barrel.
2 barrels,	1 hogshead.
2 hogsheads,	1 pipe.
2 pipes,	1 tun.

1. A tumbler holds about half a pint; how many tumblerfuls in a quart?

2. How many pints will fill a quart measure?

3. If a milkman mixes 2 pints of water with 4 quarts of milk, how much will he have in all?

4. Suppose half a gallon leaks out of a barrel of oil; how many gallons remain in it?

5. How many quart pitchers can be filled from a two-gallon pail?

6. How many barrels will a pipe of wine fill?

7. If I have 8 quarts of cider, and give half of it away, how many gallons have I left?

LESSON CIII.

DRY MEASURE.

For what is Dry Measure used?

Ans. For measuring fruit, vegetables, coal, salt, grain, &c.

TABLE.

2 pints make	1 quart.
8 quarts,	1 peck.
4 pecks,	1 bushel.
36 bushels,	1 chaldron.

The dry quart measure is of wood; the liquid quart measure is of tin.

A small measure contains 2 quarts.

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1. A man bought a bushel of apples; if one peck was rotten, how many pecks were good?

2. How many quarts in a half peck?

3. If a horse eats 8 quarts of oats a day, how long will it take him to eat a bushel?

4. If a pint of chestnuts costs 6 cents, what will a quart cost?

5. If 5 girls go a berrying, and each girl picks a quart, how many pints will they have in all?

6. Which are cheaper, potatoes at a dollar a bushel, or 30 cents a peck?

7. What is a peck of corn worth, at 80 cents a bushel?

LESSON CIV.

TIME MEASURE.

60 seconds make	1 minute.
60 minutes,	1 hour.
24 hours,	1 day.
7 days,	1 week.
365 days,	1 year.
366 days,	1 leap year.
100 years,	1 century.

How many calendar months in a year?

Ans. Twelve.

Name the calendar months of the year in order, and the number of days in each.

	DAYS.		DAYS.
1st month, January,	31.	7th mo., July,	31.
2d month, February,	28.	8th mo., August,	31.
3d month, March,	31.	9th mo., September,	30.
4th month, April,	30.	10th mo., October,	31.
5th month, May,	31.	11th mo., November,	30.
6th month, June,	30.	12th mo., December,	31.

These days added together make 365 days in the year. In Leap Year, February is one day longer, and the whole number of days is 366.

There are four seasons in the year:—

SPRING, consisting of March, April, May;
SUMMER, June, July, August;
AUTUMN or FALL, September, October, November;
WINTER, December, January, February.

LESSON CV.

MISCELLANEOUS TABLE.

12 things make	1 dozen.
12 dozen,	1 gross.
20 things,	1 score.
24 sheets,	1 quire of paper.
20 quires,	1 ream.
56 pounds,	1 firkin of butter.
100 pounds,	1 quintal of fish.
196 pounds,	1 barrel of flour.
200 pounds,	1 barrel of pork.

1. Which weighs more, a barrel of flour or a barrel of pork, and how much?

2. If a man lives to be "three score years and ten," how old is he?

3. A box of pens holds a gross; how many dozen in a box? How many pens in a box?

4. How many sheets in one fourth of a quire of paper?

5. If five pounds of butter are taken out of a full firkin, how many pounds will remain?

6. How many pounds in 5 quintals of codfish?

7. Which month is the shortest in the year?

8. John was to stay in the city a week. He has been there 5 days; how much longer is he to stay?

QA103
Q152
1880

APPLETONS'

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